



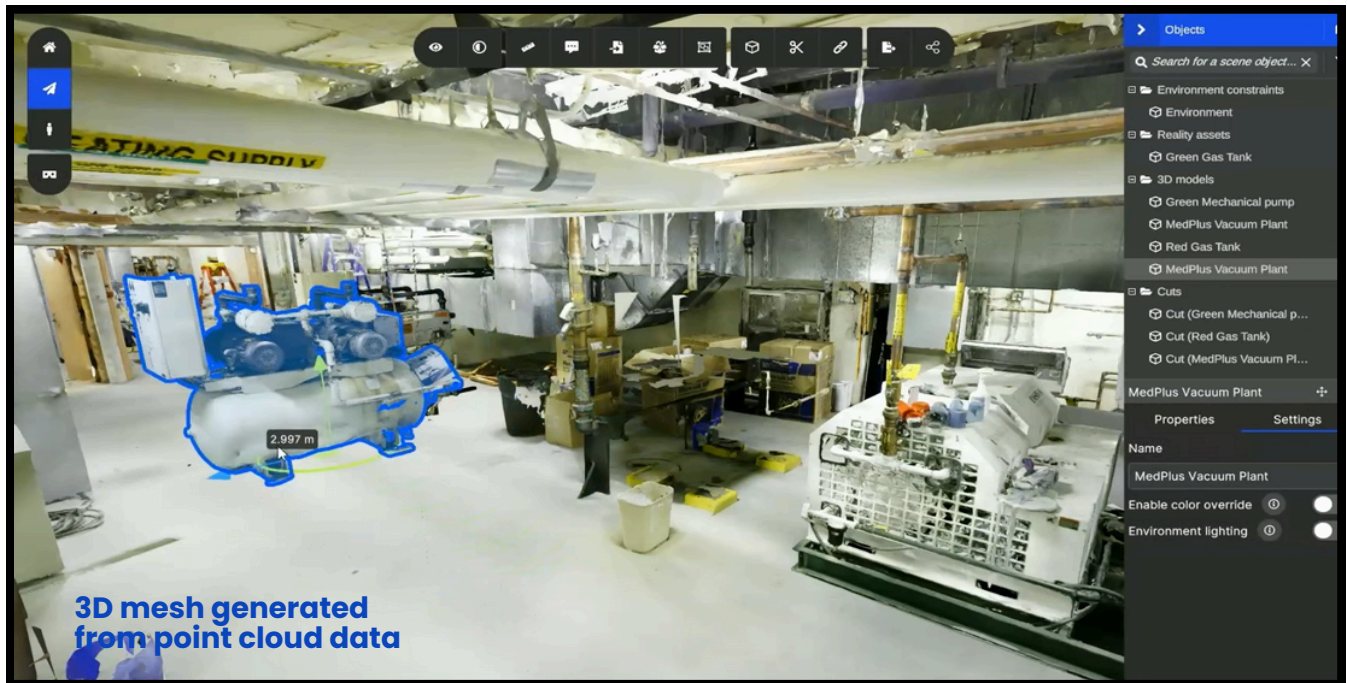
Multinational Food & Beverage Company

Case Study

Streamlining
Equipment
Move with
Prevu3D
Digital Twin
Solution

Project Overview

The multinational F&B company Pilot Plant project aims to facilitate layout and installation testing in preparation for the plant's relocation to a new building. Additionally, the project seeks to enable virtual tours of the pilot plant for international stakeholders.



Project Objectives

Create a virtual Pilot Plant layout before physically moving equipment.

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- Improve planning and efficiency.
- Minimize disruption during the physical move.
- Allow for early identification of potential issues.

Challenges

Prior to implementing Prevu3D's digital twin solution, the equipment moving process faced challenges due to outdated 2D floor plans. These traditional methods failed to provide a comprehensive overview that a 3D environment and scan data could deliver. With the adoption of the digital twin solution, it became possible to visualize designs realistically before implementation, improving the validation of plans and reducing risks.

Prevu3D deliverables

- Point cloud scan of the pilot plant (E57 file and Recap format).
- Interactive 3D model, accessible via web and desktop platforms.
- 360-degree panoramic images.
- VR walkthrough, allowing employees to virtually explore the new layout.

Implementing Prevu3D solutions

Prevu3D at a glance

Prevu3D software leverages reality capture data to enhance engineering design and project collaboration through its end-to-end [platform](#). The software automates the conversion of point clouds into detailed meshes for high-quality scan visualization, streamlining workflows. With tools like [RealityPlan™](#), engineering processes accelerate by integrating CAD and BIM for seamless plan updates and informed decision-making.

Additionally, [RealityConnect™](#), a series of native plugins (Autodesk Revit, Inventor, SOLIDWORKS, AutoCAD Plant 3D, and NVIDIA Omniverse), simplifies CAD modeling from point clouds and meshes, ensuring efficient use of reality capture data within CAD/BIM environments.



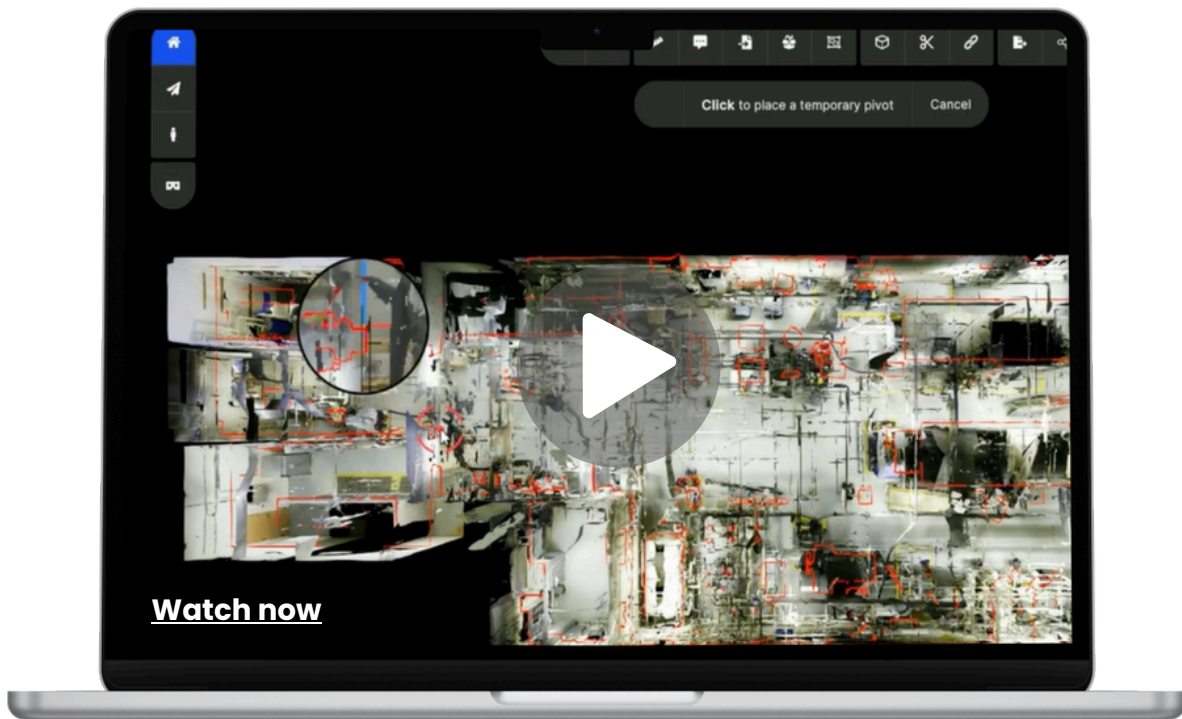
Key solutions and features

Prevu3D's **RealityPlan™** solution offers advanced engineering tools for streamlining the relocation process. Its ability to scale and move equipment seamlessly between meshed environments provides flexibility and precision. The VR navigation feature enables users to virtually explore the environment, while integration with AutoCAD 3D drawings ensures compatibility and flexibility in design workflows.



Integrating Prevu3D into workflows

The integration of Prevu3D's digital twin technology into existing workflows has brought transformative benefits. The software facilitates the validation of designs initially created on 2D floor plans, allowing for a smoother transition to 3D environments. Simulation tools within Prevu3D enabled effective planning, such as dividing the building into zones by testing partition walls.



Results: Impact on Efficiency and Accuracy

Prevu3D solutions significantly improved the efficiency and accuracy of the equipment relocation process. The animation tool modeled equipment paths during installation, ensuring precise navigation through access points and identifying potential bottlenecks. [RealityPlan™](#) tools also helped uncover previously overlooked areas, fostering collaboration between project engineers and equipment operators. This iterative feedback refined the overall planning and execution processes.

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The interactive software was useful in linking design engineers with operators. It was helpful to ‘walk the line’ in presentations to communicate area or equipment changes with large groups – more effective than 2D drawings for people unfamiliar with an area.

Engineer, Pilot Plant & Facilities

Use Cases Explored During the Pilot Project

- Embedding 3D models of OEM libraries in Prevu3D, with a focus on Original Equipment Manufacturers (OEMs).
- Creating mock-ups for unavailable 3D models.
- Editing existing surface models (meshes) of assets using third-party software such as SolidWorks and the Autodesk Suite.
- Enabling VR view capabilities for the final layout.
- Planning the relocation of elements and equipment between facilities.
- Redesigning the facility.
- Facilitating seamless collaboration during the project.
- Enhancing communication and coordination with partners and providers.
- Providing training tools for new employees.
- Creating spatial 3D asset definitions using [RealityAssets™](#).
- Generating MP4 videos of dismantling equipment lines.
- Conducting clash detection courses.